

## ABSTRACT

A multiprocessor system is provided that comprises a plurality of processor units coupled together via a backplane and a timestamp distribution system. The timestamp distribution system provides a first time signal to the plurality of processor units over the backplane. The timestamp distribution system comprises a first timestamp distributor for generating the first time signal and a first timestamp communication bus on the backplane for transporting the first time signal from the timestamp distributor to the plurality of processor units. The first time signal comprises a first time data word that is transmitted at a periodic rate wherein the first time data word does not change each time the first time signal is transmitted.